NOVEMBER/DECEMBER 2024

# CCA21/FCA21/CCS21 — C++ AND DATA STRUCTURES

Time : Three hours Maximum : 75 marks

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SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is polymorphism?
2. Define inline function.
3. What is type conversion? Give an example.
4. Define pointer.
5. What do you mean by data?
6. Expand the term ADT.
7. What is tree traversal?
8. Expand the term DFS. (or) What is DFS?
9. Define bubble sort.
10. What is hashing?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) List the benefits of object oriented programming.

Or

(b) What is constructor? List the special characteristics

12. (a) Explain the rules for operator overloading in detail.

Or

(b) Discuss about the virtual function with an example.

13. (a) Write short note on infix to postfix conversion.

Or

(b) Briefly explain the polynomial additions with an example.

14. (a) Describe the pre-order traversal.

Or

(b) Explain with example the breadth first search algorithm.



15. (a) Explicate the merge sort algorithm.

Or

(b) Describe the binary search algorithm.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. In detail discuss on C++ token with examples.

17. Expound the formatted I/O operations.

18. Discuss in detail the doubles linked list with example.

19. Explain the advantages and disadvantages of binary search algorithm.

20. Describe the selection tree sort algorithm with example.

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